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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,864	07/14/2003	Hiroshi Shigetaka	9281/4602	6963

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EXAMINER	
HOLTON, STEVEN E	
ART UNIT	PAPER NUMBER
2629	
MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/618,864	SHIGETAKA, HIROSHI	
	Examiner	Art Unit	
	STEVEN E. HOLTON	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 8-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 8-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is made in response to applicant's Request for Continued Examination filed on 2/20/2008. Claims 1-3 and 8-12 are currently pending in the application. An action follows below:

Response to Arguments

2. Applicant's arguments, see page 5, filed 2/20/2008, with respect to rejection under 35 USC 112 2nd paragraph have been fully considered and are persuasive. The rejection of claims 1 and 8 has been withdrawn.

Applicant's arguments filed 2/20/2008 have been fully considered but they are not persuasive.

The Examiner respectfully disagrees with the arguments regarding Gerpheide et al. (USPN: 6680731) discourages the user of a supporting surface. Gerpheide et al. discloses the use of a touch sensitive input device formed on a flexible substrate that is then attached to the underside of the cover of a keyboard case (col. 4, lines 8-12; col. 5, lines 59-62; and col. 7, lines 30-33). Within the summary of the invention, the applicant discusses the connection of the flexible sensor layers and how they are bonded to the insulating support plate (page 3, lines 14-24). Later, within the description of the invention the applicant describes the bonding of the sensor to the reverse side of the support plate (page 11, lines 8-16 and lines 21-26; page 12, lines 5-11 and lines 14-16). In each case, the support plate is described as element 4. Earlier within the application, the applicant has defined element 4 as the housing of a personal computer such as the

planar area near a keyboard of computer housing (page 6, lines 4-5 and lines 12-24; Figs. 4 and 5). This shows that the support plate is the same as the molded resin housing of the PC body. Similar to this, Gerpheide et al. discloses bonding a touch sensor to the rear of the plastic keyboard housing of a personal computer. Therefore, the keyboard housing used for bonding by Gerpheide et al. is the same as the molded resin structure named a support plate by the applicant. Thus, Gerpheide et al. does teach bonding the X and Y electrodes to the reverse surface of a support plate as defined in the current invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3 and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerpheide et al. (USPN: 6680731) in view of Gerpheide (USPN: 5861875).

Regarding claims 1 and 8, Gerpheide in the '731 patent discloses a touch sensitive input device formed on a flexible substrate (col. 5, lines 24-28 and lines 55-58), and the substrate having an extension (Fig. 10A, elements 82 and 84) with a circuit substrate provided in the extension (Fig. 10A, element 82). Regarding the bonding of the touch sensor to a reverse side of a support plate, Gerpheide discloses attaching the touchpad to the underside of the cover of a keyboard case (col. 4, lines 8-12; col. 5,

lines 61-62; and col. 7, lines 30-33). The Examiner agrees that the '731 patent does not specifically use the term 'bonding' but does use adhereing (col. 5, line 61) and attaching (col. 6, line 31) to describe the connection between the touchpad and the keyboard cover. The Examiner interprets this action to read on the concept of 'bonding' based on the '731 patents teaching to directly attach the touch sensor to the underside of the keyboard cover for support. The '731 patent also notes the top plate can be 'arcuate' (col. 4, line 10) which indicates a curved support plate could be used.

However, the '731 patent does not expressly discuss the layout of the sensor electrodes or the specific use of insulating layers. The '731 does disclose using touch sensors developed by the '731 patent assignee, the Cirque Corporation.

Gerpheide in the '875 patent discloses a touchpad input sensor owned by the Cirque Corporation that provides a capacitive touchpad sensor that includes a flexible insulating substrate (Fig. 8a, element 380) with a grid of electrodes applied to the underside of the substrate (Fig. 8a, element 130 directly below element 380). Underneath the first set of electrodes is an insulating layer (Fig. 8a, element 370) and finally a second set of electrodes aligned in the opposite direction (Fig. 8a, element 130). The layout of the electrodes is shown in more detail in Fig. 8b. The '875 patent further shows the touchpad being attached underneath a keyboard body surface (Fig. 2).

At the time of invention it would have been obvious to one skilled in the art to combine the teachings of Gerpheide in the '731 and '875 patents to produce a device as described in claims 1 and 8. The '731 patent provides a flexible touch sensor that is

bonded to the reverse side of a curved support plate and the '875 patent provides a electrocstatic capacitance type touch input sensor using arrays of X and Y electrodes formed on a substrate with an insulating layer. It would have been logically obvious to use the suggestion of the '731 patent to use touch sensors produced by the Cirque Corporation, such as the touch sensor described in the '875 patent. Thus, it would have been obvious to combine the teachings of the '731 patent and the '875 patent to produce an input device as described in claims 1 and 8.

Regarding claims 2 and 10, Gerpheide et al. discloses fitting the touch sensor to the underside of a curved surface such as the wrist rest of a keyboard (col. 5, lines 12-14). This would be a recessed area of the surface to hold the input sensor area.

Regarding claim 9, Gerpheide et al. discloses fitting the touch sensor on the underside of arcuate surfaces (col. 5, lines 16-18).

Regarding claim 3, Gerpheide et al. discloses highlighting the area on the housing or support surface that is above the touch area so that a user is able to determine where the touch sensor is located (col. 5, line 64 – col. 6, line 2).

Regarding claims 11 and 12, Gerpheide et al. discloses that the PC board is preferably attached beneath the flexible substrates of the touchpad to reduce the overall area needed to attach the touchpad inside the casing (col. 7, lines 25-41). Therefore, it would be a matter of design choice for one skilled in the to fold the PC board underneath the flexible substrates as shown by Gerpheide et al. or to connect the PC board to the underside of the casing next to the flexible substrates.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEVEN E. HOLTON whose telephone number is (571)272-7903. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steven E. Holton
Division 2629
March 14, 2008
/Bipin Shalwala/
Supervisory Patent Examiner, Art Unit 2629